AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0021] with the following amended paragraph:

[0021] Fig. 1 illustrates the use of cytoplasmic male sterility (CMS) in hybrid seed production;

Figs. 2A-2J illustrate the flowers of fertile, *pol* CMS and transgenic *B. napus* cv. Westar plants;

Fig. 2A shows complete flowers of *pol* CMS Westar plants (left) and *pol* CMS Westar plants transformed with the *mas2'*/A9-A6e construct (note the increased size of the petals in the transgenic plant);

Fig. 2B shows complete flowers of partially male sterile transgenic plants obtained by introducing AP3/A9-A6u into Westar, plants (*nap*) (left) and male fertile Westar (*nap*) (note the decreased pigmentation of the petals of the transgenic flower);

Fig. 2C shows flowers with petals and sepals removed of *pol* CMS Westar (left) and *pol* CMS Westar transformed with the *mas2'*/A9-A6e construct (note the increased size of the stamens and the more highly developed anthers in the transgenic plant);

Fig. 2D shows flowers (with petals and sepals removed) of partially male sterile transgenic plants obtained by introducing AP3/A9-A6u into Westar (*nap*) (left) and male fertile Westar (*nap*) (note the reduction in anther size in the transgenic plant);

Fig. 2E shows complete flowers of (left to right) *pol* CMS Westar, male sterile transgenic plant 40-8 obtained by introducing the AP3/A9-ORF construct into male fertile Westar, (*nap*), and male fertile Westar (nap);

Fig. 2F shows the flower of transgenic plant 40-8 with petals and sepals removed (note that the four inner stamens have been transformed into carpels);

Fig. 2G shows complete flowers of the partially fertile transgenic plant 40-10 obtained by introducing the AP3/C4-ORF construct into a male fertile Westar (*nap*) (left); a flower of the recipient strain Westar (*nap*) is shown on the right (Note the reduction in petal size of the transgenic plant);

Fig. 2H shows flowers with petals and sepals removed from transgenic plant 40-10 and male fertile Westar (*nap*);

Fig. 2I shows complete flowers of *pol* CMS Westar (left) and a partially fertile transgenic plant obtained by introducing the AP3/A9-A6e construct into *pol* CMS Westar (note the increased petal size of the transgenic plant);

Fig. 2J shows flowers with petals and sepals removed of *pol* CMS Westar (left) and a partially fertile transgenic plant obtained by introducing the AP3/A9-A6e construct into *pol* CMS Westar (note the increased size of the stamens and anthers in the transgenic flower);

Figs. 3A-3D illustrate phenotypic changes accompanying *mas2'*-driven expression of A9-A6e in *pol* CMS Westar; **A**: Transgenic plant inflorescence; **B**: *pol* CMS Westar inflorescence; **C**: entire transgenic plant; **D**: *pol* CMS Westar plant (Note the increased size of the inflorescence and vegetative internodes in the transgenic plant);

<u>Fig. 4 illustrates the modification of male fertility in transgenic *Arabidopsis thaliana* plants;</u>

Fig. [[4]] <u>5</u> illustrates the use of the AP3/A9-A6e construct as a dominant fertility restorer gene in *B. napus;* and

Fig. [[5]] <u>6</u> illustrates the use of the AP3/C4-ORF construct to enhance pol cytoplasmic male sterility in B. *napus*.

Please replace Table 1 bridging pages 12 and 13, with the following amended Table 1.

Table 1

Genetic constructs and corresponding phenotypes of transgenic plants

Construct[1]	Introduced into	Kan^R plants recovered	Confirmed transgenic[2]	Phenotype(s) of confirmed transgenic plants
~~AP3/C4-ORF[3]~~ AP3/C4-ORF	fertile Westar (*nap*)	17	12	Variable male sterility ranging from near complete sterility (2 plants) to complete fertility (most plants); some plants show alterations in floral organ number, morphology & identity
AP3/A9-ORF	"	21	7	Variable male sterility ranging from near complete sterility (1 plant) to complete fertility (most plants); some plants show alterations in floral organ number, morphology & identity
AP3/A9-A6e	male sterile Westar (*pol*)	9	7	All plants partially male fertile; stamen and petal size intermediate between fertile Westar (*nap*) and Westar (*pol*) CMS plants
AP3/A9-A6u	fertile Westar (*nap*)	20	9	Most plants male fertile with some flowers partially sterile; some plants display reduced stamens; pale yellow petals; changes in whorl identity and/or organ number.
mas2'/A9-A6e	male sterile Westar (*pol*)	22	16	Most plants partially male fertile; stamen and petal size intermediate between fertile Westar (*nap*) and Westar (*pol*) CMS plants; some plants show changes in floral whorl identity; elongated inflorescence and vegetative internodes.
AP3/GUS	Westar (*nap*)	13	9	Identical to Westar (*nap*); GUS expression observed at base of petals and stamens, as expected

[1] Construct elements presented in sequence: promoter/presequence-coding sequence; AP3, *Arabidopsis APETELA3* promoter; C4, yeast COX4 presequence; A9, Neurospora ATP9 presequence; ORF, edited *orf224* coding sequence; A6e, edited *atp6* coding sequence; A6u, unedited *atp6* coding sequence.

2 Confirmed by Southern blot analysis using a probe derived from the NPTII gene.

~~3 Epitope-tagged edited *atp6* coding sequence fused to the A9 presequence.~~

~~4 Edited atp6 coding sequence, no targeting presequence.~~

Please replace paragraph [0040] with the following amended paragraph:

[0040] The observation of similar types of sterility modifications in multiple independently transformed plants provides very strong support for the initial hypotheses, namely: (i) that constructs which allow targeting of the ORF224 or unedited ATP6 polypeptides to the mitochondria can confer sterility on male fertile plants and hence serve as synthetic maintainer genes; and (ii) that constructs which allow targeting of the edited ATP6 polypeptide to the mitochondria can serve as synthetic restorer genes. The date also indicates that to avoid deleterious effects on vegetative growth and female fertility, expression of these constructs using a tissue specific or inducible promoter is recommended. The analysis of the R1 progeny of the RO plant (a plant recovered from the transformation - regeneration protocol) the [[C4-ORF]] A9-ORF-expressing plant 40-8 (see above) has provided compelling evidence that the phenotypes observed are inheritable and due to the transgene. We raised 20 of these plants to maturity. A range of floral phenotypes was evident, from the extreme abnormalities of the parental plant (where only two very sterile anthers form and the remaining four anthers are converted to pistil-like organs), to the partial male fertility observed in many of the RO plants that express this construct. All the R1 progeny plants contained the transgene, suggesting that the original 40-8 RO plant may have had more than one copy of the gene. This would further indicate that the degree of sterility expressed is dependent on gene dosage. This gene dosage effect provides an additional means of modifying the degree of sterility expressed by the transgenic plants.

Please replace paragraph [0047] with the following amended paragraph:

[0047] Although a method for enhancing the sterility of a pol CMS plant using the AP3/C4-ORF construct has been described, the [[AP3/A9-A6a]] <u>AP3/A9-A6u</u> and AP3/A9-A6ep constructs could also be used for this purpose, as the expression of each of these constructs results in completely male sterile pol CMS transgenic plants.